

WHAT IS CLAIMED IS:

1. A method for manufacturing a semiconductor device,
comprising:

forming a polysilicon gate electrode over a substrate;

forming source/drain regions in said substrate proximate said
polysilicon gate electrode;

forming a blocking layer over said source/drain regions, said
blocking layer comprising a metal silicide;

siliciding said polysilicon gate electrode to form a silicided
gate electrode.

2. The method as recited in Claim 1 wherein said forming a
blocking layer occurs prior to said siliciding said polysilicon
gate electrode.

3. The method as recited in Claim 1 wherein said blocking
layer is a silicided source/drain contact region.

4. The method as recited in Claim 1 wherein said silicided
gate electrode comprises a different metal silicide than said
blocking layer.

5. The method as recited in Claim 4 wherein said blocking
layer comprises a cobalt silicide and said silicided gate electrode
comprises a nickel silicide.

6. The method as recited in Claim 1 wherein said blocking
layer has a thickness ranging from about 10 nm to about 35 nm.

7. The method as recited in Claim 1 further including
forming a protective layer over said polysilicon gate electrode
prior to said forming a blocking layer over said source/drain
regions.

8. The method as recited in Claim 7 wherein said protective
layer is a silicon nitride protective layer.

9. The method as recited in Claim 1 wherein siliciding said
polysilicon gate electrode to form a silicided gate electrode
includes fully siliciding said polysilicon gate electrode to form
a fully silicided gate electrode.

10. A method for manufacturing an integrated circuit,
comprising:

forming semiconductor devices over a substrate, including;

forming a polysilicon gate electrode over a substrate;

forming source/drain regions in said substrate proximate
said polysilicon gate electrode;

forming a blocking layer over said source/drain regions,
said blocking layer comprising a metal silicide;

siliciding said polysilicon gate electrode to form a
silicided gate electrode; and

forming interconnects within dielectric layers located over
said substrate for electrically contacting said semiconductor
devices.

11. The method as recited in Claim 10 wherein said forming a
blocking layer occurs prior to said siliciding said polysilicon
gate electrode.

12. The method as recited in Claim 10 wherein said blocking
layer is a silicided source/drain contact region.

13. The method as recited in Claim 10 wherein said silicided
gate electrode comprises a different metal silicide than said
blocking layer.

14. The method as recited in Claim 13 wherein said blocking
2 layer comprises a cobalt silicide and said silicided gate electrode
3 comprises a nickel silicide.

15. The method as recited in Claim 10 wherein said blocking
2 layer has a thickness ranging from about 10 nm to about 35 nm.

16. The method as recited in Claim 10 further including
2 forming a protective layer over said polysilicon gate electrode
3 prior to said forming a blocking layer over said source/drain
4 regions.

17. The method as recited in Claim 16 wherein said protective
2 layer is a silicon nitride protective layer.

18. The method as recited in Claim 10 wherein siliciding said
3 polysilicon gate electrode to form a silicided gate electrode
4 includes fully siliciding said polysilicon gate electrode to form
5 a fully silicided gate electrode.
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